



## Post-doctoral position (1 year)

### *Energetic modeling of innovative personal transportation system*

#### **Research Laboratory**

DRIVE Laboratory (Département de Recherche en Ingénierie des Véhicules pour l'Environnement – Research department in vehicle engineering for the environment) is located in ISAT (Institut Supérieur de l'Automobile et des Transports – the French institute of automotive and transportation engineering created in 1991), Nevers, France. ISAT belongs to the University of Burgundy. The DRIVE members are part of the following competence teams:

- o Transport Materials and Acoustic
- o Energy Propulsion Electronics and Environment: EPEE group

The coordinator and the team of this project are part of the EPEE group which has been created following a new teaching department opening in ISAT in 2008. This new department and this new research team follow the new needs of the personal transportation changes. This EPEE group is composed of two teams "Energy, propulsion and sustainable mobility" and "Intelligent Vehicle" composed with 2 Professors, 8 Associate Professors, 2 Assistant Lecturers and 10 PhD students. The "Energy-Propulsion and Sustainable Mobility" team created in 2009 a mix Public-Private Research Centre called ID-Motion in collaboration with the company Danielson Engineering which is specialized in fast study and construction of technological prototypes for automotive and aircraft sectors. The goal of this structure is to carry out joint research activities in the sustainable mobility domain and oriented towards future power trains for land vehicles.

The successful candidate will integrate into the EPEE group as well as contribute to the collaborative research efforts with other combustion research groups, nationally, and internationally.

#### **Mission**

The postdoc position is funded by the project ROLLKERS which aims to develop a unique connected personal mobility device in order to increase the walking speed. This collaborative project involve the DRIVE laboratory, Danielson Engineering, Aboard, CEVAA and AREELIS. As part of this project, the post-doctorate researcher will be in charge in the energy modeling of the ROLLKERS including the impact of the cyclic phenomenon of walking and a precise evaluation of the rolling resistance in order to evaluate the autonomy and contribute to the energy management to promote the autonomy. To do so, a comprehensive model will have to be constructed.

1 year contract

Gross Salary: 2500euros per month

Starting in September 2019.

#### **Candidate profile**

Candidates must have a Ph.D, in Mechanical Engineering. They should have a high level of experience and competence in modeling. A demonstrated output in terms of published papers in peer-reviewed journals is also required. Knowledge of French is not required.

#### **Contact:**

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